

FAA-STD-015

February 2, 1970

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
STANDARD**

RECONDITIONING OF LONG RANGE RADAR RADOMES



Prepared By
SYSTEMS RESEARCH AND DEVELOPMENT SERVICE

FAA-STD-015

FOREWORD

The life-expectancy, appearance and maintenance cost of Federal Aviation Administration Long Range Radar Radomes are directly affected by the quality of their protective finish against the deleterious effect of the natural environments.

The excellence of the paint means little if applied to an improperly prepared surface; premature failure of the protective finish is certain to occur. Correct thickness of a paint coat has a direct bearing on the durability of the finish. The compatibility of materials is an indispensable requirement to a quality finish.

This standard has been prepared by the Systems Research and Development Service to provide the necessary engineering guidance, consistent with the state of the art, for use in reconditioning Long Range Radar Radomes. Compliance with this standard will promote uniformity in finish procedures, minimize the chances of technical errors and contribute materially to the quality level of the protective finishes.

Any questions or suggested modifications should be directed to the Environmental Development Division, RD-400, Attn: RD-440.

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CHAPTER 1. SCOPE

1.1 Scope.- This standard establishes the requirements of the Federal Aviation Administration (FAA) for the surface preparation, joint sealing, and painting of ARSR rigid radomes.

CHAPTER 2. PURPOSE

2.1 Purpose.- The purpose of this standard is to properly implement a uniform radome reconditioning system to insure realization of the improvements on a universal basis, resulting in increased radome service life and reduced maintenance costs.

CHAPTER 3. DEFINITIONS

3.1 Definitions.- The term "paint", as used herein, includes paints or coatings for radomes, whether used as primers, intermediates, or finish coats. Paints to be used are for protection of the surfaces of radomes. Detailed definitions concerning general terminology as used in the paint industry are referenced in Fed. Std. No. 141, Section 8.

3.1.1 Types of Radomes.-

- Type I - Radomes procured under specification FAA-1298, unpainted.
- Type II - Radomes painted in accordance with prior Aeronautical Center and Regional contracts.
- Type III - Radomes originally procured by the USAF which may or may not be painted.
- Type IV - Types I, II, or III radomes painted in accordance with this standard.

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CHAPTER 4. MATERIALS

4.1 General requirements.- Paints shall be well dispersed; shall not settle, cake or thicken adversely in the container; shall be readily dispersed with a paddle to a smooth, uniform consistency and shall have good brushing and coverage characteristics. Paints shall be delivered in sealed containers that plainly show the designated brand name, formula or specification number, batch number, color, date of manufacturer, manufacturer's directions, and the name of manufacturer, all of which shall be plainly legible at the time of use. Materials shall conform to the specification shown in the painting schedule herein and to the requirements hereinafter specified. A "Supplier's Record of Batch Production Data and Test Results" shall be furnished for each batch in accordance with Federal Standard No. 141, Method 1031, except that batch production data may be limited to calculated lot composition, and test results may be limited by the FAA representative to those of the following properties for which there are requirements in the material specification:

- (a) Weight per gallon
- (b) Viscosity
- (c) Fineness of grind
- (d) Drying time
- (e) Color
- (f) Gloss

Colors and tints shall conform with the designated colors as specified herein. When the required quantity of a particular paint is 10 gallons or less and when minor repairs become necessary, a proprietary brand of material similar to that specified may be used and the manufacturer's technical data required for paint furnished in larger quantities is not required.

4.2 Table I.- This table lists various types of materials that should be used on radomes. The first column is a list of materials by name; the second column is a list of the corresponding Federal or Military Specifications used for procurement of the specific type of paint; the third column further identifies the materials as to their intended use, application, or other pertinent information.

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TABLE I

<u>Material</u>	<u>Specification</u>	<u>Remarks</u>
Sealer, Caulking Rubber Type	TT-S-00227 (date of latest issue) Type II, Class A	Application to Radome joints
Tape for Radomes	MIL-R-27125	Tape for Radome panel joints
Epoxy Primer and Enamel Top Coats	FAA-E-2443	Application to cleaned and reconditioned fiber glass radomes

4.3 Reference publications. - A list of material specifications and other publications follows.

Fed. Std. No. 141

Paint, Varnish, Lacquer, and Related
Materials; Methods of Inspection,
Sampling and TestingFAA Specification
EPB-R-23A

Radome Reconditioning

FAA Specification
1298

Rigid Reinforced Plastic Radome

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CHAPTER 5. CLEANING AND PREPARATION OF SURFACES

5.1 General.- All items in place and not intended to be painted shall be removed, masked or otherwise protected prior to surface preparation and painting. Following completion of painting, removed items shall be reinstalled and all masking removed. Surfaces to be painted shall be clean before applying the paint or surface treatment. Cleaning and painting shall be so programmed that dust and other contaminants from the cleaning process will not fall on wet, newly-painted surfaces. Painting shall not proceed until all imperfections, cracks and holes in surfaces to be painted are repaired and the surfaces cleaned in a manner subject to the approval of the FAA inspector. All oil and grease must be removed prior to the application of paint. The "water drop" test should be used to determine if oil and grease has been removed by the cleaning process. This test is performed by sprinkling water randomly on the radome surface. If the water droplets form balls, the surface is not clear of oil and/or grease.

5.2 Surface Preparation Type I Radomes.- The freshly-cured polyester fiberglass surface of a radome or part thereof will likely be contaminated with a mold release compound, such as silicones. The coatings specified herein will likely not adhere properly to such release compounds. It is necessary to lightly sand the radome surface and then wipe thoroughly with clean cloths saturated with Xylol. This should remove dust and the remaining release compound and soften the polyester surface so the prime or first coat of paint will properly adhere to the radome exterior surface.

Unpainted radomes that have been exposed to the weather for 6 months or more should be cleaned with solvents or detergents prior to application of the epoxy prime coat. If weathering has proceeded to where the fiberglass has delaminated or frayed, the I.F.B. should require reconditioning with polyester resin (see EPB-R-23) before being painted.

5.3 Surface preparation Types II, III, and IV Radomes (repainted).- Prepare the radome for repainting by performing the following steps as needed.

5.3.1 Unsound Surfaces.- The contractor and FAA inspector shall make a joint inspection of the radome to determine unsound surface conditions, such as peeling, blistering, alligatoring, checking, cracking, curling, or other paint failures. The unsound surface conditions shall be corrected before painting.

- a. Where surface irregularities due to misapplied or smeared caulking, protruding resin-covered glass fibers or paint blisters, etc. exist, remove these irregularities by use of suitable scrapers, sanders and wire brushes.

- b. Where the exposed panel surface has hard glossy resin, sand the glossy surface with medium grit paper to provide proper adhesion of the the primer coat. Small spots of exposed fibers of glass shall be spot-primed with the epoxy primer. These areas will later be primed again when the whole radome is primed.
- c. Where dust or loose particles remain on the radomes surface, the existing paint coating is chalky, or the radome surface is contaminated with oil film or smudges, clean surface of radome with cloths soaked with Xylol to properly condition the surface for priming or painting.
- d. The use of hot water detergent cleaning procedures can be allowed by the FAA inspector if same cleans the old painted surface properly. It is not the intent of this standard to detail the exterior surface cleaning procedures as long as they clean properly and to the satisfaction of the FAA inspector.
- e. Some chalk is allowed on the cleaned surface, as the specified paint will bind some chalk. The maximum chalk allowed is 6 on the Federal Standard No. 141, Method 6411 scale. The inspector should use this method to determine the degree of chalk remaining on the dry cleaned surface.

5.4 Panel Joints

5.4.1 General.- Temperature and humidity conditions required for painting (section 6.3) shall apply for caulking new panel joints and reconditioning old panel joints.

5.4.2 New Panel Joints.- Prior to final tightening of new panels, all seams shall be caulked with material listed in section 5.4.4. After tightening of the panels, all seams shall be taped in accordance with Section 5.4.3.4.

5.4.3 Reconditioning Panel Joints

5.4.3.1 Panel Joint Preparation.- Where recaulking is required in the contract, remove all existing caulking material from the specified panel joints, using either an electric or air impact hammer fitted with a cutter head attachment designed to remove the bulk of the caulking. (A suggested design for the cutter head is offered in the attached Figure 2, "Decaulking tool"; however, the actual design is optional.) Remove the bulk of the material with the impact hammer and remove the remaining loosened material with a rotary brush designed to clean narrow cracks. McMaster-Carr No. 4856F2 is a narrow face wheel brush suitable for this purpose. Where necessary to assure proper adhesion of new caulking compound, clean the joints with the cleaning solvent recommended by the manufacturer of the caulking compound used. Use caution to prevent inhalation of toxic solvent vapors.

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5.4.3.2 Materials preparation.- Combine and mix the two-part sealant material (section 5.4.4) in accordance with the manufacturer's instructions. Use caution in the handling of the catalyst which is highly toxic. Avoid repeated or prolonged contact with the caulking compound, and especially avoid contact with open breaks in the skin and any ingestion. Mix only an amount of caulking compound at one time which can be applied during the workable potlife of the material. Load the mixed compound into disposable polyethylene cartridges for immediate use in sealant application guns.

5.4.3.3 Application of Caulking Materials.- Apply caulking with air-operated sealant gun. Hold the nozzle of the gun against the inner surface of the joint or fillet so that the channel of the joint will be filled from the bottom up. Fill the joints to produce a bead surface level with the panel surface. Do not overfill. Remove any compound inadvertently dropped or smeared on the panels. Discard any unused compound which has reached the end of workable potlife.

5.4.3.4 Taping.- After cleaning and preparing the radome for painting with the epoxy system, all joints shall be covered with pressure sensitive tape. The tape shall be wide enough to overlap 1 inch from the edge of the radome joint.

5.4.4 Materials.- Caulking materials shall meet TT-S-00227 (date of latest issue) Type 2, non-sag on vertical surfaces, and Class A compound resistant to 50% total joint movement minimum. The tape shall be a pressure sensitive type meeting the requirements of specification MIL-R-27125.

CHAPTER 6. PAINT APPLICATION

6.1 General.- No paint shall be used until approved by the FAA inspector. Paint shall not be applied to surfaces until such surfaces are approved by the FAA inspector. Additional coats of paint shall not be applied unless they are likewise approved. The contractor shall keep the FAA inspector fully informed as to his proposed painting schedule to permit adequate time for inspection of materials and surface conditions. Paint shall be applied uniformly in the proper consistency by skilled painters only, using appropriate methods of application approved by the FAA inspector. To prevent formation of skins and loss of volatile solvent, paint containers shall be covered when delays in application are encountered. Adjacent work and materials shall be protected by ample dry cloths or other suitable coverings. All coats of paint shall be free from sags, wrinkles, runs, holidays, blisters, smears, dirt and colors other than those specified. Paint drops and oversprays shall be removed. The hiding of the primer by the top coat shall be complete and each coat shall be so applied as to produce a film of uniform thickness. Special attention shall be given to insure that all edges, corners and crevices receive a film thickness equivalent to that of adjacent painted surfaces. Respirators shall be worn by persons engaged or assisting in spray painting.

6.2 Paint Properties, Storage, Mixing and Thinning.- The paint shall be thoroughly stirred and kept at a uniform consistency during application. Paints of different manufacturers or different types shall not be mixed together. Where approved by the FAA inspector as necessary to suit conditions of surface, temperature, weather and method of application, the packaged paint may be thinned immediately prior to application in accordance with the manufacturer's directions, but not in excess of 1 pint of suitable thinner per gallon. The use of thinning for any reason shall not relieve the contractor from obtaining complete hiding and the specified dry paint film thickness.

6.3 Atmospheric Conditions.- Paint shall be applied only to surfaces that are completely free from surface moisture as determined by sight or touch. While painting is being done, the temperature of the surface to be painted and of the atmosphere in contact therewith shall be maintained at a minimum of 60°F and a maximum of 95°F. If necessary, painting may be continued by enclosing the surfaces with temporary shelters and applying artificial heat, provided the temperature requirements prescribed above are maintained throughout the curing period.

6.4 Time between Surface Preparation and Painting.- Surfaces that have been cleaned, pretreated, and/or otherwise prepared for painting shall be given a coat of the specified first-coat material as soon as practicable after such preparation has been completed but in any event prior to any significant accumulation of dirt, dust, oil, etc. on the prepared surfaces.

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6.5 Colors.- The color of the prime coat shall conform to Federal Standard 595 No. 35231. The color of the white top coat shall conform to Federal Standard 595 No. 37875.

6.6 Method of Application

6.6.1 Primer Application.- Use the application method (spray, brush or roller) which will produce a smooth, adhesive, uniform coating. Thin the primer with solvents if necessary (section 6.2). Apply successive coats of primer until dry film thickness of 2 to 3 mils is obtained. Allow at least 20 hours of curing time on primer before application of white epoxy top coat.

6.6.2 Top Coat Paint Application.- The top coat specified may require several applications to produce the required dry paint thickness. The minimum total dry paint average thickness applied (primer plus necessary number of top coats) shall be 6 to 8 mils for all type radomes as specified. Radomes located within 100 miles from the ocean or gulf shall have a total dry paint thickness of 8 mils minimum. Radomes located more than 100 miles from the ocean or gulf shall have a total dry paint thickness of 6 mils minimum. Types II and III radomes that are to be refinished or repainted already have some paint thereon. In all cases when the change is made to the new epoxy paint system, the epoxy primer shall be applied. After that time subsequent repaint jobs should only require the application of the white epoxy top coat.

The method of top coat paint application shall be determined by the contractor. It is recommended, however, that the airless spray method be used where feasible, as this produces a more uniform paint film thickness.

6.6.3 Coating Progress.- Sufficient time shall elapse between successive coatings to permit proper drying. Paint shall be considered dry for recoating when it feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

6.6.4 Clean-up.- Upon completion of painting, the painting contractor shall remove all paint spots from other surfaces, all rubbish, discarded materials, surplus materials, scaffolds, etc., caused by his work and leave the area clean and orderly.

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CHAPTER 7. INSPECTION OF PAINTED SURFACES

7.1 General.- The FAA inspector of paint or repaint jobs on fiberglass radomes shall inspect the paint applied to the radome panels to determine if the dry primer is 2 to 3 mils thick and the total dry paint film thickness is 6 mils or 8 mils minimum as required.

The FAA inspector shall determine if the dry paint thickness specified is attained in the following manner.

Select 10% of the total radome panels at random but approximately equally distributed over the entire radome surface, and record their locations.

After the epoxy primer has been applied, determine the average dry paint thickness of each selected panel, using the scratch gage (7.6) making at least 5 measurements. In this manner the average thickness of the primer over all or a portion of the radome can be determined. If the thickness of the primer is thus determined to be less than 2 mils, additional primer should be applied.

Following the application and curing of the white epoxy top coat or coats, again select 10% of the total radome panels as representing the average for all panels. One-half of those selected or 5% of the total panels should be those which have had the thickness of primer determined. Measure the top coat thickness using the same method as specified above for determining primer thickness. If the measured thickness of the top coat is less than that necessary to obtain the total thickness of the paint system (6 or 8 mils as specified), additional epoxy top coat should be applied.

The subsequent repaint jobs will likely not require a primer. Repainting will be with the epoxy white coat only. The old white coat being so repainted will likely be 1 to 2 mils thick and should be brought back to the original 6 or 8 mils total. The original light blue epoxy primer can continue to be used as a base for measuring the total white coat but the thickness of new white paint applied can only be determined when the old white paint thickness is known.

7.2 Determine if injury to the exterior paint job has occurred and, if so, the contractor shall be required to apply a sufficient amount of the specified paint to the injured spots so the full coat or coats of paint on the radome exterior is uniform and has a total minimum of 6 or 8 mils dry paint film thickness as specified.

7.3 Prepare a final inspection report of action by the FAA inspector on each job and send to the Sector Chief, with copies to the Contracting Officer, Area Office, Regional Office and the Systems Maintenance Service.

7.4 At least once per year and at regular intervals, the exterior paint coating on all radomes under the supervision of FAA shall be inspected and a report of results sent to the offices listed in 7.4.3. The inspector shall use ASTM Form D-1150 (see Figure 3) to record his observations for:

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<u>7.4.1</u>	- Degree of Chalking	Method 6411 of Fed. Std. No. 141
<u>7.4.2</u>	- Degree of Checking	Method 6421 of Fed. Std. No. 141
<u>7.4.3</u>	- Degree of Erosion	Method 6431 of Fed. Std. No. 141
<u>7.4.4</u>	- Degree of Flaking	Method 6441 of Fed. Std. No. 141
<u>7.4.5</u>	- Degree of Blistering	Method 6461 of Fed. Std. No. 141
<u>7.4.6</u>	- Degree of Cracking	Method 6471 of Fed. Std. No. 141
<u>7.4.7</u>	- Degree of Mildew Collection	
<u>7.4.8</u>	- Degree of Dirt Collection	
<u>7.4.9</u>	- Degree of Color Change	
<u>7.4.10</u>	- General Appearance	
<u>7.4.11</u>	- Dry Paint Film Thickness	

Note 1.- The Methods 6411 and 6471 inclusive (excepting 6451) are pictorial standards found in Federal Test Method Standard No. 141, Paint, Varnish, Lacquer and Related Materials: Methods of Inspection, Sampling and Testing and are available from the U.S. Government Printing Office.

Note 2.- Form D-1150 can be purchased from (1) American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103, or (2) Federation of Societies for Paint Technology, 121 S. Broad Street, Philadelphia, Pa. 19107, Federation Standard No. Id-7. See Form D-1150 attached.

Note 3. Procedure for Periodic Field Inspection.- The FAA inspector should have a loose-leaf book to hold all the pictorial standards available. These standards are compared with the condition of the paint on the radome. The records will reveal when the radome was last painted and the brand name of all paints applied thereon, plus the dry paint film thickness at the time of approving the last paint job. Form D-1150 has space allocated for recording that data.

For instance, the first field inspection, after the last paint job, should be made one year thereafter and the general appearance is rated 9. Circle the place where the 12 months exposure vertical line crosses the No. 9 horizontal line. A second field inspection should be made 24 months after the last paint job and the general appearance is rated 7. Circle where the 24 months vertical line crosses the No. 7 horizontal line. The third inspection made after 36 months exposure rates the general appearance as 3. Draw a line from 0 months and 10 junction thru the 3 circles and a general performance curve is established. Use the same procedure for other types of paint deterioration listed in section 7.4.4 or other desired tests like dry paint film thickness, and full data is thus secured on the quality of paints exposed in areas where radomes are located.

7.5 Repainting.- When inspection reveals that the existing paint job needs repainting, the inspector shall record the condition of the old paint job, placing special emphasis on the dry paint thickness of the white top coat. Usually the white paint is less than 2 mils thick. The repaint job should increase the dry paint thickness back to the specified minimum limits of 8 mils if the radome is within 100 miles from the sea coast and 6 mils if the radome is located elsewhere.

Each time a repaint job is finished and accepted, a new D-1150 form should be started for that radome and copies sent to the offices listed in 7.4.3. By this procedure a constant record of all paint jobs for a specific radome becomes available and scientific facts established on the effect of climatic variations on durability.

7.6 Testing for Dry Paint Film Thickness.- Use the Gardner Scratch Thickness Gage (0 to 5 mils range). See Figure 1.

The top surface of the coating being tested is the reference required. The gage is portable, about 3 inches in diameter and 1 inch thick and can be used to determine the dry paint thickness applied to most surfaces. No calibration is required.

This gage consists of a metal slitting saw mounted eccentrically on a supporting side plate. It is made of stainless steel and 2 sets of teeth used for scratching through a paint film to a substrate or prior coating are included. The prime coat is a different color than the white top coat. When testing for the dry paint thickness of the white top coat, scratch that coat with increasing depth of teeth until the blue primer coat is noted. If the white top coat is more than 5 mils thick, this scratch gage will not reach the blue primer. A special scratch gage can be made with a range of 0 to 10 mils but it is doubted this added expense is necessary. For non-coastal areas the white coat should be 3 to 4 mils. In coastal areas a maximum of 6 mils could be required.

Grasp the scratch thickness gage firmly and lower to the surface to be measured. With a gentle downward pressure the tooth of the gage is drawn a short distance over the surface. Change to a tooth that protrudes a greater distance and repeat. Note the gage has lines identified 0 to 5 and such parts thereof can be evaluated.

The paint scratched off when testing a finished job should be touched up with the specified paint.

This instrument is available from Gardner Laboratory, Inc., P.O. Box 5728, Bethesda, Maryland 20034. Telephone (301) 656-3600.

7.7 Patch Testing.- The exact formula of paints that have formerly been applied to each radome is not always known. It is thus good practice for the FAA inspector to require the contractor apply the epoxy

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primer to a small area, about 2' x 2', and observe if this primer lifts, blisters or otherwise affects the old paint. After the epoxy primer and white epoxy to coat system has been first applied, no subsequent spot or patch testing is necessary. When these epoxy coating cure, they are no longer affected by subsequent coats of this specified epoxy.

If the epoxy primer does blister or lift the old paint, some testing may be required to select an intermediate primer. Tests have proven the specified epoxy primer does not lift or blister the MIL-P-9503 Hypalon type white top coat. If blisters are noted, use the Method 6461 pictorial standards to identify the degree and size of blisters. A few small ones should not be objectionable.

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CHAPTER 8. STORAGE AND SAFETY

8.1 Storage.- All tools and materials used by the painting contractor on the job shall be stored in a single, ventilated place, approved by the FAA inspector, in a manner which will not jeopardize facility equipment or operation. Such storage place shall be kept neat and clear and all damage thereto, or to its surroundings, shall be repaired. Any used rags, waste, empty containers, etc. must be removed from the area every night and every precaution taken to avoid the danger of fire.

8.2 Safety.- All precautions shall be taken to prevent the possibility of fire in areas being painted. There should be adequate ventilation for the removal of toxic fumes. Food should not be kept or eaten in any area exposed to dust from sandpapering or fumes from paint thinners. Paint with toxic ingredients shall not be used where consumption by humans or animals is a possibility. Adequate illumination should be provided to assure complete coverage and for the safety of painters.

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CHAPTER 9. RECONDITIONING SYSTEMS

9.1 General.- Surface listed in Table II, Reconditioning Systems for Fiberglass Rigid Radomes, shall receive the surface preparation, paints, number of coats and the dry paint thickness prescribed. Methods of surface preparation, cleaning methods and pretreatment of surfaces prior to painting shall be accomplished in accordance with the detailed requirements as set forth in Chapter 5 for each particular surface.

9.2 Recommended Reconditioning Systems.- The recommended systems are as follows:

Reconditioning Systems for Fiberglass Rigid Radomes, Table II, page

9.3 How to use the Systems table.- This Standard can readily be used to extract painting data by excerpts of desired sentences and/or paragraphs, or by calling for a paint system in accordance with Table II. To select and specify a paint system, the following method is recommended:

1. Select the system in accordance with the type of surface which must be painted and the exposure/environmental service condition.
2. Select the system number, bearing in mind the probable age of the structure vs. desirable age, cost to paint vs. atmospheric conditions and the effect that paint deterioration will have on the useful life of the Radome.

TABLE II: RECONDITIONING SYSTEMS FOR FIBERGLASS RADOMES

System Number	Surface Radome	Surface & Joint Preparation	Primer	Finish Coat
RE-1	Type I	Sections 5.2, 5.4	Light Blue Epoxy	White Epoxy
RE-2	Type II	Sections 5.3, 5.4	Light Blue Epoxy	White Epoxy
RE-3	Type III	Sections 5.3, 5.4	Light Blue Epoxy	White Epoxy
RE-4	Type IV	Section 5.3		White Epoxy

Notes

Systems RE-1,
RE-2, RE-3

These systems become RE-4 after application of first primer and top coat and joint reconditioning. The average dry paint film thickness shall be 2 to 3 mils for the epoxy primer and a total minimum of 6 mils for non-coastal areas and 8 mils for radomes in areas not more than 100 miles from the coast as specified in 6.5.2. After the first repaint job with the specified epoxy system, subsequent repaint jobs will not need the primer.

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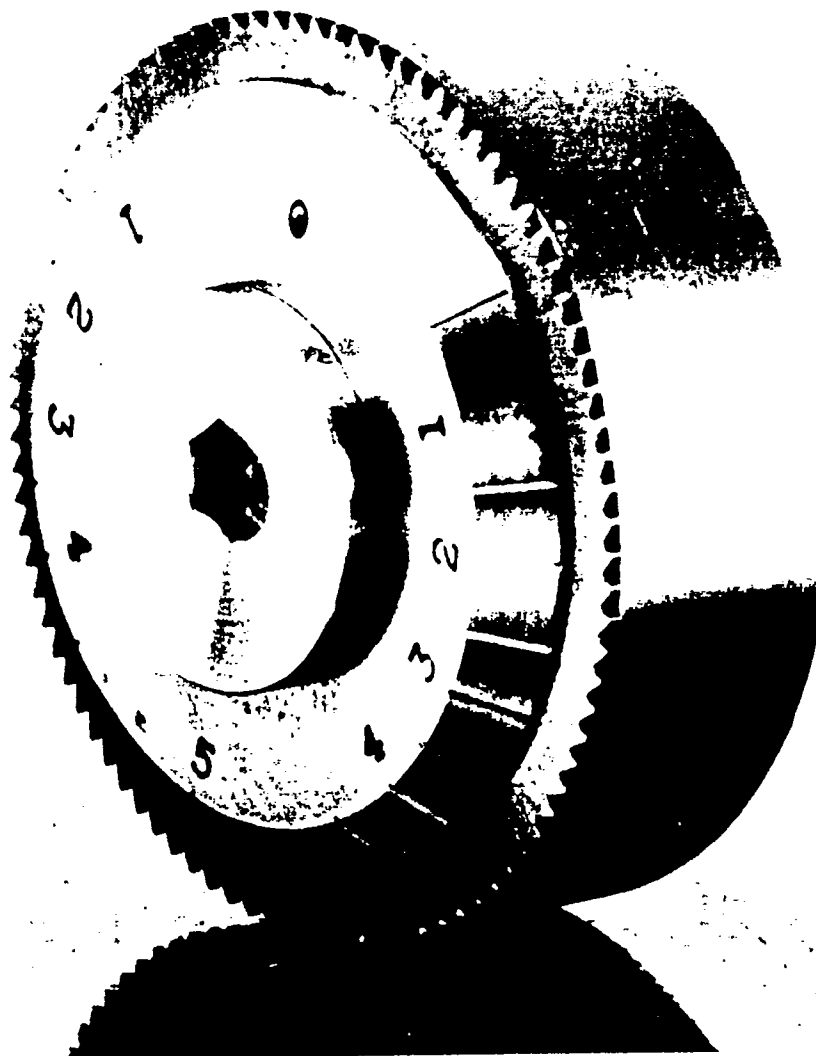


FIGURE 1. GARDNER SCRATCH THICKNESS GAGE

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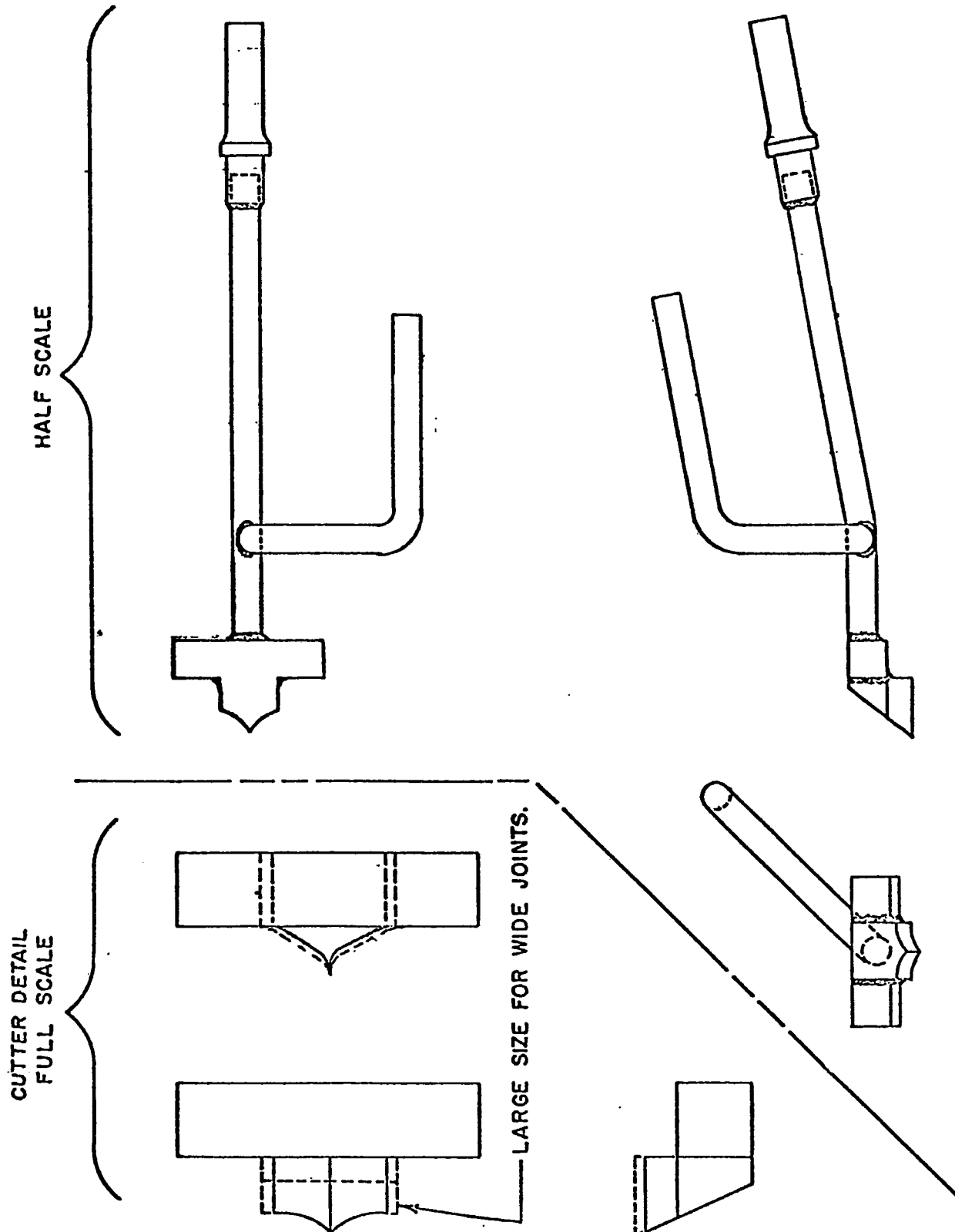


FIGURE 2. DECAULKING TOOL

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AMERICAN SOCIETY FOR TESTING AND MATERIALS
1916 RACE ST., PHILADELPHIA, PA. 19103
ASTM DESIGNATION D 1150



SINGLE PANEL PAINT RECORD FORM



FEDERATION OF SOCIETIES FOR PAINT TECHNOLOGY
121 S. BROAD ST., PHILADELPHIA, PA. 19107
FEDERATION STANDARD NO. L-7

TEST NO. _____	PROBLEM NO. _____	PAINT NO. _____	
SUBSTRATE _____	LOCATION _____	COLOR _____	
PURPOSE OF TEST _____			
EXPOSED _____	REMOVED _____	EXPOSURE _____	N S E W VERT. 45°

RATING	EXPOSURE TIME															X GENERAL APPEARANCE									
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60					
10																									
8																									
6																									
4																									
2																									
0																									

RATING	EXPOSURE TIME															X GLOSS					O CHALKING					• EROSION				
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60										
10																														
8																														
6																														
4																														
2																														
0																														

RATING	EXPOSURE TIME															X CHECKING					O CRACKING				
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60					
10																									
8																									
6																									
4																									
2																									
0																									

RATING	EXPOSURE TIME															X FLAKING					O SCALING					• PEELING				
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60										
10																														
8																														
6																														
4																														
2																														
0																														

RATING	EXPOSURE TIME															X DIRT					O MILDEW					• RUSTING				
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60										
10																														
8																														
6																														
4																														
2																														
0																														

RATING	EXPOSURE TIME															X FADING					O DARKENING					• YELLOWING				
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60										
10																														
8																														
6																														
4																														
2																														
0																														

RATING	EXPOSURE TIME																													
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60										
10																														
8																														
6																														
4																														
2																														
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RECEIVED BY _____ FIGURE 3. ASTM Form D-1150 Page 18

Figure 3 continued

COMPOSITION

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[illegible]

REDUCTION

[illegible]

MISCELLANEOUS

	1 ST COAT	2 ND COAT	3 RD COAT	4 TH COAT
WEIGHT PER GALLON.....				
CONSISTENCY.....				
HIDING POWER.....				
PIGMENT VOLUME.....				
SPREADING RATE.....				
WORKING QUALITIES.....				
LEVELING.....				
DRYING CHARACTERISTICS.....				
APPLICATION CONDITIONS.....				
DRYING CONDITIONS.....				
ATMOSPHERIC CONDITIONS.....				
CONDITION OF THE SURFACE.....				
PREPARATION OF THE SURFACE.....				
PROTECTION OF THE BACK.....				

REMARKS:

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